60-102
7 Slot LXI Modular Switching Chassis

- Fully Compliant LXI Interface
- Ethernet 100base T Interface
- Accepts Any Pickering Interfaces PXI 3U Switching Module
- More Than 500 Switching Module Configurations Available
- Applications From Simple Switching to RF, Microwave and Optical
- Supports 7 User Slots
- Compact Half Rack Width 4U Form Factor
- 350W Industrial Grade Power Supply
- Low Audible Operating Noise
- Support For Selected Instrument Modules
- RoHS Compliant

The 60-102 is fully compliant with the LXI Standard 1.3 and supports Pickering Interfaces 3U PXI switching modules. Each module is supported as though it is an LXI compliant device, complete with a driverless soft front panel that provides complete control of the module functions. The 60-102 supports up to 7 off 3U modules and is equivalent to an 8 slot PXI chassis.

The chassis allows the majority of the large number of 3U PXI modules from Pickering Interfaces to be installed and controlled through a standardized Ethernet interface. The chassis is supplied with a built-in generic IVI driver to control the PXI modules in accordance with the LXI specification, but can also be controlled through a kernel driver.

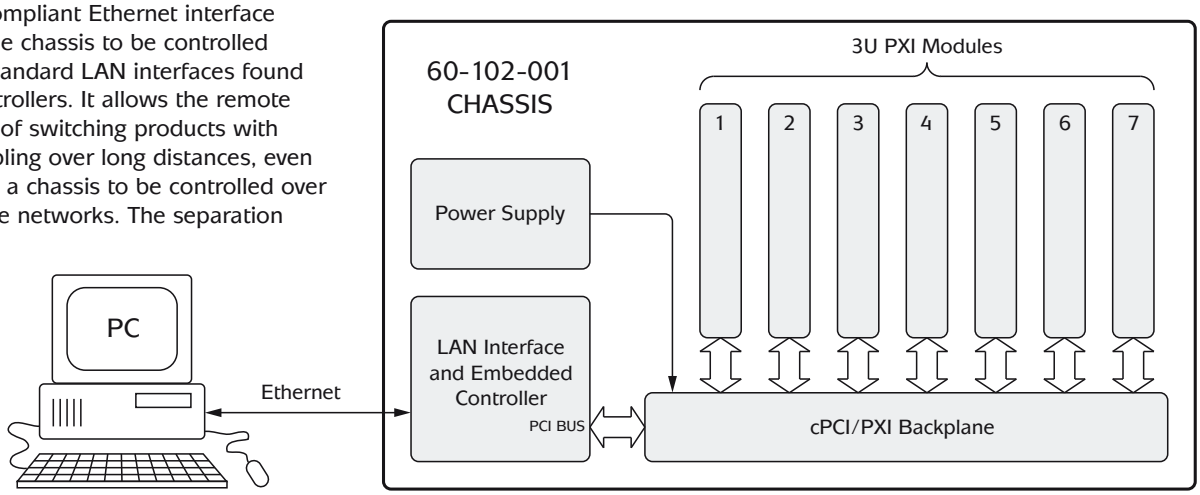
Modules available for installation in the 60-102 chassis cover a large variety of switching functions. They include simple switches, matrices and multiplexers based on reed relay and electromechanical technology which can switch from micro Amps to 40 Amps. A range of RF, microwave and optical switching functions are supported as well as some instrument functions such as variable resistor cards. For a list of compatible PXI modules, please refer to the LXI Product Guide.

The LXI compliant Ethernet interface enables the chassis to be controlled through standard LAN interfaces found on all controllers. It allows the remote operation of switching products with simple cabling over long distances, even permitting a chassis to be controlled over world wide networks. The separation of the chassis from the controller's PCI bus simplifies power-on sequencing of systems and provides a high degree of independence from the migration of the Windows and VISA environment

The form factor of the 60-102 allows efficient use of space thanks to its half rack width size and compact 4U height. Two 60cfm fans insure maximum module cooling and an efficient direct convection design allows the chassis to operate over an extended ambient temperature range of 0°C to +55°C..

The low acoustic emissions make the chassis ideal for applications such as office or laboratory environments where noise levels are critical. The sound pressure level varies between 41.6dB and 47.3dB dependant upon the fan speed which is automatically controlled according to the internal chassis temperature.

The 60-102 can be simply configured over its LXI compliant interface using any industry standard web browser. The interface can be used to load a Java based soft front panel to the user for any of the modules fitted to the chassis, permitting users to manually access modules without the need for drivers on the controller.



Plugging Pickering Interfaces PXI modules into the 60-102 LXI Modular Switching Chassis provides an LXI compliant switching platform. A simple Ethernet lead is the only physical control connection required.

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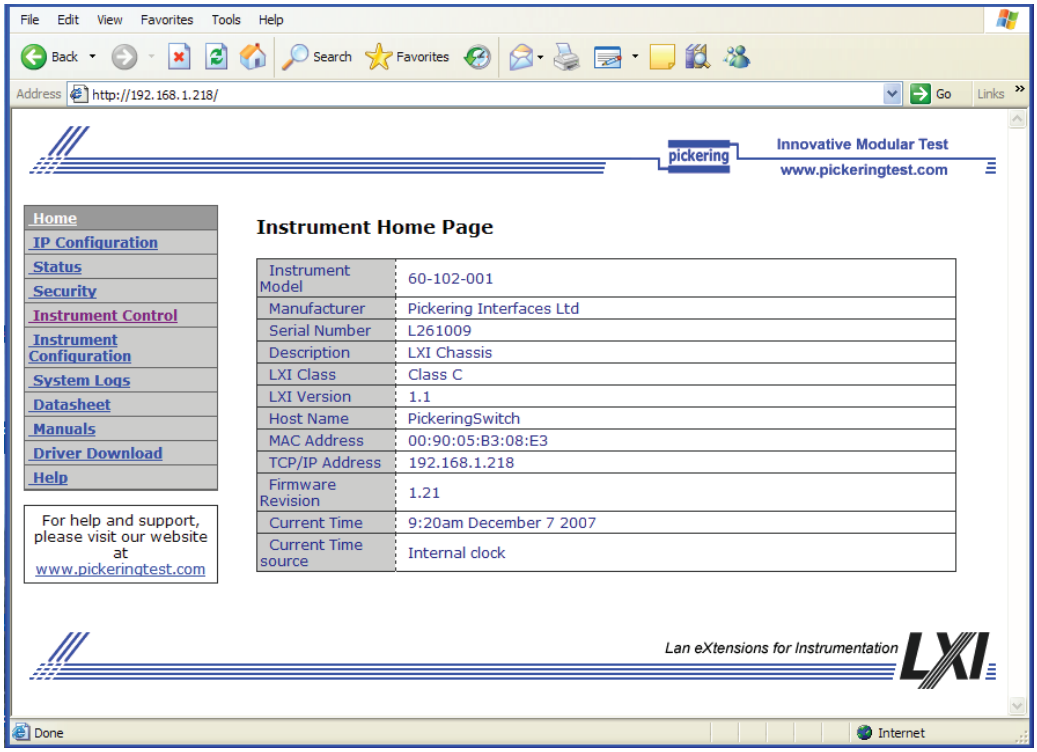
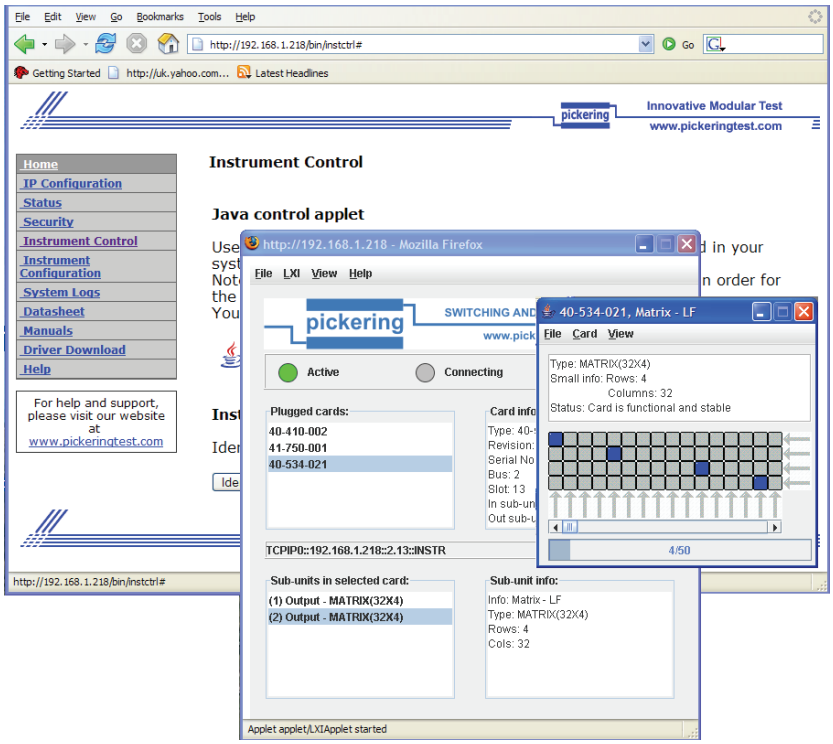


The home page for the 60-102 provides fast access to configuration information for The LXI chassis through any web browser.



The 60-102 provides soft front panels to enable manual operation through the web interface, in this example for a 40-534 matrix module.

The back window is the Instrument Control web page, the middle window lists all the modules installed in the chassis and the control panel for the selected module is at the front.

Specification

Chassis Backplane:	64 bit backplane, compliant with cPCI/PXI specification. Provides trigger, local bus support (subject to module support).
Chassis Capacity:	7 off 3U user slots available.

PXI Module compatibility

The chassis is supplied with drivers for Pickering system 40 switching modules.

Switching Support	All of 3U Pickering Interface's PXI switching modules. Includes (but not limited to): All 2 and 4 slot 3U BRIC matrices, featuring up to 2208 crosspoints.
Instrumentation support:	Programmable resistor and potentiometer cards.
Soft Front Panel:	All supported PXI modules can be controlled through a W3C compliant web browser (Internet Explorer, Firefox, Netscape and others).

For a selection guide on the range of modules capable of being hosted by the 60-102 chassis, please see the PXI Module Selection Guide in the LXI Product Guide. This is available as a download from the On-Line Catalogs section of our website: www.pickeringtest.com

Programming

All LXI modules are supplied with built-in software drivers, web pages for configuration and soft front panels as required by the LXI specification.

A variety of drivers are provided (C, .NET, IVI, SOAP) which are compatible with Windows 2000/XP operating systems and may be used in many commonly used programming environments including:

- **National Instruments** (LabVIEW, LabWindows/CVI, Switch Executive, Test Stand, MAX etc.)
- **Microsoft Visual Studio** (Visual Basic, Visual C++, Visual C#)
- **Agilent VEE**
- **Mathworks Matlab**

As well as various open source environments such as:

- **Sharp Develop**
- **Dev-C++**

Power Supply

Input Voltage Range:	100 - 240VAC
Input Voltage Frequency:	40 to 60Hz
Input Current Rating:	8A 115VAC or 4A 230VAC

Supplied with a 350W DC output power supply with the following capacity:

DC Output	Max Current
+3.3V	20A
+5V	35A
+12V	18A
-12V	2A

Note: Combined 3.3V and 5V current, 35A Maximum.

Cooling

Airflow:	Bottom intake, top exhaust
Per-slot Cooling Capacity:	25W at 55°C ambient 40W at 40°C ambient
Fans:	2 off 60cfm fans

Acoustic Emissions

Sound Pressure Level(dBA):	Minimum fan speed: 41.6dB Maximum fan speed 47.3dB
Sound Power (dBA):	Minimum fan speed: 51.9dB Maximum fan speed 55.5dB

Monitoring

LXI Interface Status LEDs:	Power, Ready, Error, LAN, Active
Chassis Status LEDs:	Power, Temperature, Fan Speed
Web Page Monitoring:	Chassis air temperature, Backplane supply voltage levels, Fan speeds

LAN Interface

Connector:	RJ45 Connector.
Connection Speed:	100baseT interface.

Designed to comply with the LXI Standard Version 1.3

Supporting Documentation

Manuals, drivers and a copy of the short form catalog are stored internally and are accessible through any browser compliant with W3C standards.

Width and Dimensions

Dimensions:	Width: 280mm (11.02") Height: 177mm (6.97") Depth: 303mm (11.93") For rack mounting, recommended to be mounted in 5U to allow free bottom intake of air.
Weight:	5.9kg (13 lbs) without PXI modules

Safety, CE & RoHS Compliance

All modules are fully CE compliant and meet applicable EU directives: Low-voltage safety EN61010-1:2001, EMC Immunity EN61000-6-1:2001, Emissions EN55011:1998.

The 60-102 Chassis also complies with the European Restriction of Hazardous Substances directive (RoHS).

Product Order Codes

LXI Modular Switching Chassis, 7-Slot	**60-102-001**
Optional 19" rack mounting hardware:	**63-102-001**

Latest Details

Please refer to our Web Site for Latest Product Details.

www.pickeringtest.com

Operating/Storage Conditions

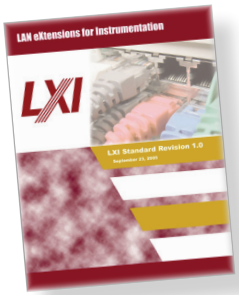
Operating Conditions (operating with specified airflow)

Operating Temperature:	0°C to +55°C
Humidity:	10% to 95% non-condensing

Storage and Transport Conditions

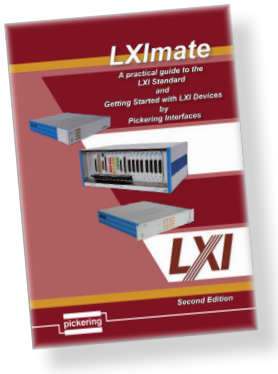
Storage Temperature:	-20°C to +70°C
Humidity:	10% to 90% non-condensing

LXI is the new standard for Ethernet control of instrumentation. It is the natural successor to GPIB (IEEE-488) incorporating LAN connectivity, full web browser support, IVI drivers and advanced triggering capability.



Pickering Interfaces is a Board level member of the LXI Consortium (www.lxistandard.org) and together with Agilent Technologies was the first company to release a fully compliant LXI device. Pickering is developing a large range of products conforming to the LXI standard and is constantly introducing new products in response to specific user demand. For further information go to www.pickeringtest.com/lxi

Pickering Interfaces has published a book, LXImate, which provides an easy to read overview of the LXI Standard. To order your free copy simply go to www.pickeringtest.com/lximate and request your copy.



Mating Connectors & Cabling

Please refer to the Pickering Interfaces "**Connection Solutions**" catalog for a full list of connector/cabling options, including drawings, photos and specifications. This is available in either print or as a download.

Alternatively our web site has dynamically linked connector/cabling options, including pricing, for all Pickering PXI modules.

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